# CASE STUDY

## INTELLIGENT AUTOMATION

**Industry**
Information Technology (Financial Services)

**Location**
Australia

**Timeline**
18 Months

**Customer Problem**

Client manually processes over 1200 emails daily, leading to time-consuming tasks & introducing human errors

**Solution**

The team developed an AI-ML-powered web app to automate email processing. It reads the inbox, fetches attachments, and scans for errors. Trained ML models screen and forward error-free attachments to the Iress Blockchain for publishing. Error files are categorized, and codes are assigned based on predefined rules and validations.

**Business Benefits**

- Faster processing
- Reduction in human errors
- Easier adoption of new document types & templates

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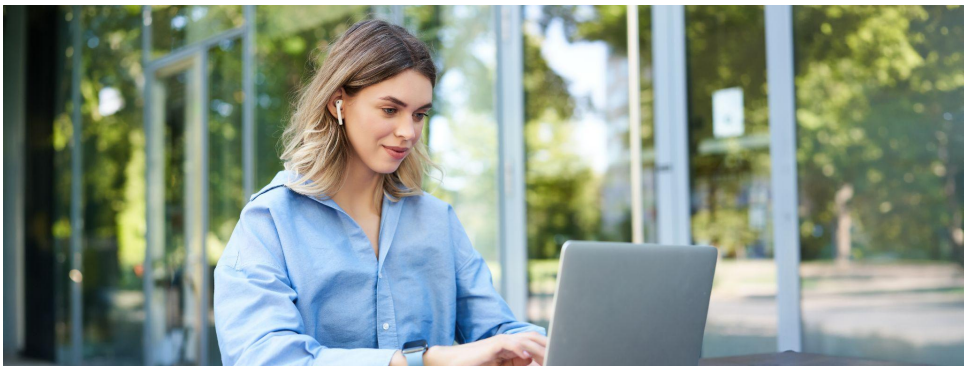
**EXPLORING . POSSIBILITIES . TOGETHER**

## How was the challenge of manual bulk email processing successfully resolved through **Intelligent Automation ?**

Simelabs, a pioneering technology firm specializing in intelligent automation solutions, has successfully implemented an AI project named "Intelligent Automation" for our esteemed client, Iress. As a Melbourne-based software firm serving the global financial services industry, Iress faced challenges in efficiently processing a high volume of fund data emails. Simelabs collaborated with Iress to design and implement an innovative solution, leveraging cutting-edge technologies to streamline operations, reduce errors, and enhance overall efficiency.



## Solution Goals

The solution goals encompass a comprehensive approach to address the challenges in manual bulk email processing. This involves reducing human intervention through the automation of 70% of Net Asset Value (NAV) data processing, thereby significantly minimizing manual effort. Simultaneously, a single-window processing system for unit price emails has been established, simplifying intricate workflows for enhanced efficiency.

To expedite processing and reduce errors, an AI/ML-powered web application has been deployed. This application swiftly processes emails by fetching attachments and scanning for errors, achieving an impressive 99% accuracy rate in document identification and 96% accuracy in data extraction. The integration of AI models facilitates the classification of various documents and extraction of essential attributes, ensuring adaptability with a flexible framework for handling newer document types and templates.

Furthermore, the solution incorporates blockchain technology to leverage tamper-proof storage, providing heightened security and maintaining data integrity. Error-free attachments are published to the blockchain, ensuring secure storage and distribution.

In promoting a collaborative environment, the solution actively involves business participation in the labeling and training of AI models. This fosters continuous improvement and ensures that the system remains dynamic and responsive to evolving requirements.

A pivotal component of the solution is the creation of a versatile framework for model training and retraining. This framework guarantees adaptability to evolving document types and templates, laying the groundwork for sustained efficiency and relevance.

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## Impact

- **Automating 70% of NAV Data**
  Substantial reduction in manual effort, enhancing operational efficiency.
- **Single Window Processing**
  Streamlined unit price email processing, reducing complexity & improving overall workflow.
- **Insightful Reporting**
  Improved reporting capabilities, offering valuable insights for informed decision making.

## Technology Framework

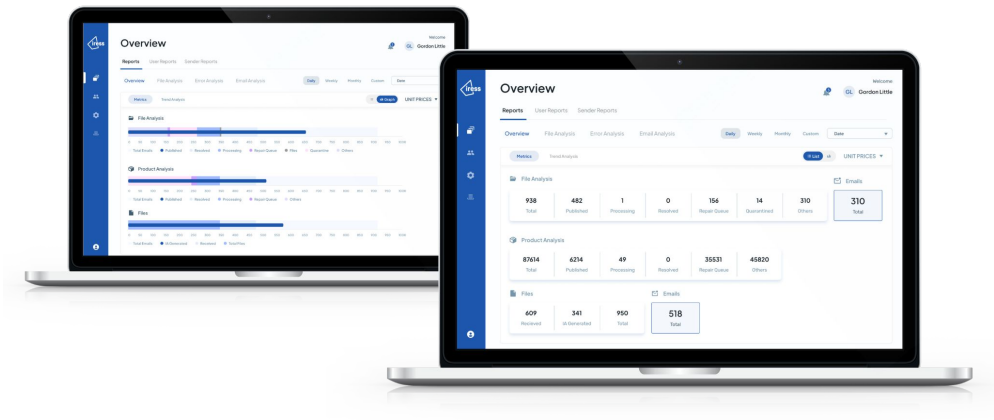
- Python
- AI/ML
  (Supervised Deep Learning with BERT)
- Blockchain
- MLOps
- Natural Language Processing (NLP)
- Classification Models
- AWS Sagemaker

# Functionalities

The system's functionalities are diverse and synergistic, collectively contributing to an advanced and efficient document processing environment. The intelligent automation and processing capabilities of the web application utilize AI and complex ML models, ensuring the swift handling of emails and attachments.

Supervised deep learning techniques are employed for categorizing emails and files, extracting data with precision. The adoption of a transfer learning approach, specifically leveraging BERT, enhances the model's understanding and accuracy in dealing with intricate data structures.

Furthermore, the system provides real-time analysis and visualization of complex data, empowering stakeholders with immediate insights. This functionality facilitates prompt decision-making and actions based on the dynamic and evolving information processed by the system.




# Solution Components

The solution incorporates a robust set of technological components, forming a comprehensive framework for addressing the challenges in document-related workflows.

The foundational technology, Python, serves as the backbone of the project, providing the necessary support for implementing logic and functionalities. Advanced machine learning is employed through AI/ML, specifically utilizing Supervised Deep Learning with BERT, enhancing document categorization and data extraction capabilities.

To ensure the security and integrity of processed data, blockchain technology is seamlessly integrated, offering tamper-proof storage. MLOps practices are implemented for the seamless deployment and management of machine learning models, streamlining operational processes.

Natural Language Processing (NLP) is a crucial element of the technological stack, enabling the system to comprehend and process natural language data efficiently. Sophisticated classification models are developed to achieve accurate document identification, enhancing the precision of the overall solution.

Utilizing Amazon's Sagemaker, the solution adopts a powerful tool for efficient machine learning model training and deployment, further enhancing the scalability and performance of the system. Collectively, these technological components form a cohesive and advanced framework, ensuring the success of the Intelligent Automation of Document-Related Workflows project.

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**INTELLIGENT AUTOMATION**

> As the CEO of Simelabs, I take immense pride in the successful implementation of our Intelligent Automation project for Iress. This venture marks a significant milestone in our journey towards delivering flawless AI-integrated automation solutions. The seamless integration of advanced technologies, including AI/ML, Blockchain, and efficient MLOps practices, has not only streamlined workflows for our client but has also reinforced our confidence in undertaking complex automation projects in the future

Derrick Sebastian
CEO, Simelabs

**simelabs**

Sinergia Media Labs (Simelabs) is a global leader in software solutions, specializing in business mobility, AI, Data Science, ML, IoT, cloud, and AR/VR technology. Based in Kochi, Kerala, they empower businesses with seamless digital transformation, providing tools for leadership in the new digital landscape. Serving renowned businesses, including six Fortune 500 organizations, their dedicated team excels in consulting, UX design, application development, system integration, and testing.

**iress**

Iress is a technology company providing software to the financial services industry in Asia-Pacific, North America, Africa and UK & Europe. Iress software has more than 200 integrations and 300 data feeds, and is used by more than 500,000 users globally

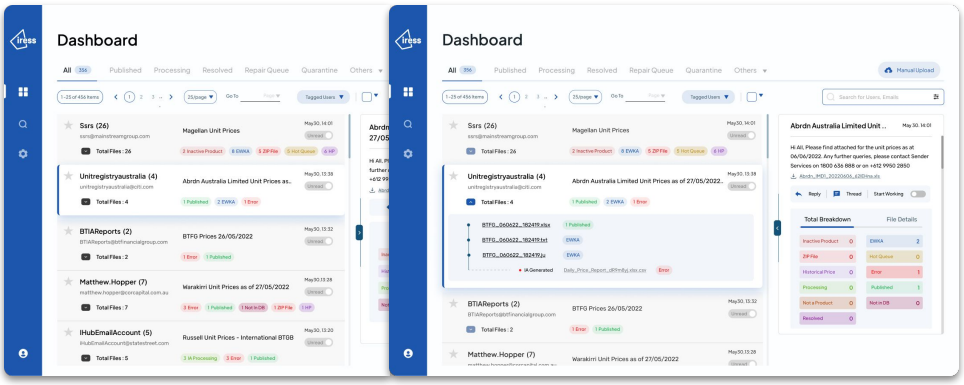
## Business Results & Benefits

The adoption of Intelligent Automation of Document-Related Workflows yields substantial business benefits, contributing to operational efficiency and data accuracy.

**Faster Processing:** Efficiently managing a high volume of emails translates to significantly reduced processing times. The system's streamlined approach ensures a prompt and responsive workflow, enhancing overall operational speed.

**Reduction in Human Errors:** The integration of AI/ML models plays a pivotal role in minimizing errors, resulting in a substantial improvement in data accuracy. The automated processes contribute to a more reliable and error-free document processing environment.

**Easier Adoption of New Document Types:** The solution's flexible framework is instrumental in facilitating the seamless adoption of new document types and templates. This adaptability ensures that the system remains agile and responsive to evolving requirements, enhancing the organization's ability to handle diverse and dynamic document landscapes.




## Future Enhancements

In envisioning the future enhancements, the Intelligent Automation of Document-Related Workflows project is poised for an evolution as a dynamic platform. This involves expanding its capabilities to handle a diverse range of document formats, including fund size and RG97, thus ensuring its adaptability to evolving industry needs.

Additionally, the solution is being explored for productization across various departments within Iress, particularly in areas like Mortgage Data Operations, to maximize its utility and impact. Furthermore, there is a strategic initiative to extend the system's functionality by providing real-time Intelligent Automation dashboards for clients. This enhancement aims to elevate transparency and client satisfaction, offering stakeholders immediate insights into the automated processes, thus fostering a more informed and collaborative relationship.

## Conclusion

Intelligent Automation of Document-Related Workflows successfully addresses the challenges faced by Iress in fund data email processing. The strategic integration of advanced technologies ensures not only immediate gains in efficiency and accuracy but also lays the groundwork for future scalability and broader organizational applicability. The collaborative approach involving AI, Blockchain, and active business participation reflects our commitment to delivering innovative solutions that align with our clients' needs and expectations.